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WOOD, HERRON & EVANS, LLP 2700 CAREW TOWER 441 VINE STREET CINCINNATI, OH 45202			CHAU, COREY P	
			ART UNIT	PAPER NUMBER
			2644	

DATE MAILED: 12/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/867,736

Applicant(s)

YANG ET AL.

Examiner

Corey P. Chau

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 22 July 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 and 5 rejected under 35 U.S.C. 102(e) as being anticipated by U.S.

Patent No 20040120537 to Takei.

3. Regarding Claim 1, Takei discloses an audio post processing method comprising the following sequenced steps: matrix mixing an audio signal, then decoding a surround channel of the audio signal (i.e. two source signals of an L total signal (Lt) and R total signal (Rt) are supplied to an adaptive matrix circuit 1 to be decoded into four channel signals of a front left channel (Lch) signal, center channel (Cch) signal, front right channel (Rch) signal, and a rear surround channel (Sch) signal. This meets the claim limitation matrix mixing an audio signal, then decoding a surround channel of the audio signal because the matrix mixing performs the decoding of the audio signal), then directing a low frequency input channel of the audio signal to a low frequency effect compatible speaker (i.e. any one of the channels, Lch, Rch, Cch, Sch, can be the low frequency input channel because it contain low frequency and is directed to a speaker, which is compatible of producing the low frequency), transmitting an ambient noise

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containing channel of the audio signal to a speaker system operable to create a three dimensional effect (i.e. Lch, Rch, SLch, SRch)(Fig. 2; page 1, paragraph 0001), then center channel equalizing the audio signal (2)(Fig. 2).

4. Regarding Claim 5, Takei discloses driving a plurality of loudspeakers positioned towards the rear and to the sides of the listener with a surround channel of the signal (SLch,SRch)(Fig. 2; page 1, paragraph 0001).

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1, 3, 4, 6-9 17-18, 20, 22-24, 26, and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6167140 to Watanabe in view of U.S. Patent No. 6760448 to Gundry.

7. Regarding Claim 1, Watanabe discloses an audio post processing method comprising the following sequenced steps: decoding (2) a surround channel of the audio signal (i.e. a decoder decoding input signals in which multichannel signals are encoded to output multichannel signals) (Figs. 3 and 11-13), then directing a low frequency input channel of the signal to a low frequency effect compatible speaker (Figs. 3 and 11-13, reference LF), transmitting an ambient noise containing channel of the signal to a

speaker system operable to create a three dimensional effect (Figs. 3 and 11-13, references 6L, 6R, and surround speaker), then center channel equalizing the input signal (i.e. the gain corrector 7, equalize the gain of the amplifier 4A for the L channel with the gain of the amplifier 4B for the C channel, therefore meets center channel equalizing)(column 8, lines 23-43). Watanabe discloses a decoder, wherein the decoder separates the inputted signals into four signals, but only generally; no specific hardware or software is taught. Therefore it would have been obvious to one having ordinary skill in the art to seek known methods of decoding. Gundry for example discloses a matrix decoding process, wherein the matrix decoding process sum a left and right inputs to produce an center signal C and subtract the left and right inputs to produce a surround signal (i.e. matrix mixing an audio signal) (Fig. 5; column 7, lines 25-60). It would have been obvious to one having ordinary skill in the to employ any known method to decode an audio signal, such as that of Gundry. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Watanabe with the teaching of Gundry to utilize the martrix decoding process in order to produce multichannel signals from the input signals.

8. Regarding Claim 3, Watanabe as modified discloses matrix mixing the signal by applying a Prologic algorithm (Gundry, Fig. 5; column 7, lines 25-60).

9. Regarding Claim 4, Watanabe as modified discloses driving a centrally-located loudspeaker with a center channel of the signal (Figs. 3 and 11-13, reference 11).

10. Regarding Claim 6, Watanabe as modified discloses using a bass channel of the signal to drive a low frequency effect loudspeaker (i.e. speaker 6L or speaker 6R can be

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a low frequency effect loudspeaker because it is capable to product low frequency audio signal) (Figs. 3 and 11-13).

11. Regarding Claim 7, Watanabe as modified discloses transmitting ambient noise to the plurality loudspeakers positioned towards the rear and the sides of the listener (6L,6R,12).

12. Regarding Claim 8, Watanabe as modified discloses transmitting ambient noise to a loudspeaker positioned towards the front of a listener to create an encompassed impression therein (6L,6R,11).

13. Regarding Claim 9, Watanabe as modified discloses inputting a listener preference and available equipment status into a player console, wherein the listener preference reflects a desired post processing effect (column 5, lines 12-24).

14. Regarding Claim 17, Watanabe discloses an audio post processing system, comprising: at least one decoder operable to perform the following sequenced steps: Watanabe discloses an audio post processing method comprising the following sequenced steps: decoding (2) a surround channel of the audio signal (i.e. a decoder decoding input signals in which multichannel signals are encoded to output multichannel signals) (Figs. 3 and 11-13), then directing a low frequency input channel of the signal to a low frequency effect compatible speaker (Figs. 3 and 11-13, reference LF), transmitting an ambient noise containing channel of the signal to a speaker system operable to create a three dimensional effect (Figs. 3 and 11-13, references 6L, 6R, and surround speaker), then center channel equalizing the input signal (i.e. the gain corrector 7, equalize the gain of the amplifier 4A for the L channel with the gain of the

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amplifier 4B for the C channel, therefore meets center channel equalizing)(column 8, lines 23-43); a player console operable to receive system listener input (column 5, lines 12-24); a signal source producing a signal comprised of a plurality of channels, each channel operable to drive a loudspeaker positioned at one or more of a plurality of destinations (Figs. 3 and 11-13). Watanabe discloses a decoder, wherein the decoder separates the inputted signals into four signals, but only generally; no specific hardware or software is taught. Therefore it would have been obvious to one having ordinary skill in the art to seek known methods of decoding. Gundry for example discloses a matrix decoding process, wherein the matrix decoding process sum a left and right inputs to produce an center signal C and subtract the left and right inputs to produce a surround signal (i.e. matrix mixing an audio signal) (Fig. 5; column 7, lines 25-60). It would have been obvious to one having ordinary skill in the to employ any known method to decode an audio signal, such as that of Gundry. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Watanabe with the teaching of Gundry to utilize the martrix decoding process in order to produce multichannel signals from the input signals.

15. Regarding Claim 18, Watanabe as modified discloses output amplifiers operable to drive a loudspeaker positioned at one or more of the following positions relative a listener: front, right, left and rear (4A,4B,4C,4D).

16. Regarding Claim 20, Watanabe as modified discloses said listener input reflects listener preference and the disposition of available equipment (Figs. 3 and 11-13; column 5, lines 12-24).

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17. Regarding Claim 21, Watanabe as modified discloses surround sound channel output amplifiers (4D) driving loudspeakers positioned towards the rear (12) and toward the sides of the listener (6R).

18. Regarding Claim 22, Watanabe as modified discloses a center channel equalizer output amplifier (4B) driving a loudspeaker positioned towards the front and center of the listener (Figs. 3 and 11-13).

19. Regarding Claim 23, Watanabe as modified discloses a bass channel amplifier (4B, 4D) driving a low frequency effect loudspeaker (i.e. speaker 6L or speaker 6R can be a low frequency effect loudspeaker because it is capable to product low frequency audio signal) (Figs. 3 and 11-13).

20. Regarding Claim 24, Watanabe as modified discloses said at least one decoder utilize DCS techniques said to direct ambient noise channels of the audio signal to loudspeakers positioned towards the rear of the listener (Figs. 3 and 11-13).

21. Regarding Claim 26, Watanabe as modified discloses said at least one decoder create a center channel of the audio signal for driving a loudspeaker that is centrally located with respect to the listener (Figs. 3 and 11-13, references 3C and 11).

22. Regarding Claim 29, Watanabe discloses an audio post processing method comprising performing a **sequence selected from the group** consisting of: a) decoding (2) a surround channel of the signal (i.e. a decoder decoding input signals in which multichannel signals are encoded to output multichannel signals) (Figs. 3 and 11-13) Watanabe discloses a decoder, wherein the decoder separates the inputted signals into four signals, but only generally; no specific hardware or software is taught. Therefore it

would have been obvious to one having ordinary skill in the art to seek known methods of decoding. Gundry for example discloses a matrix decoding process, wherein the matrix decoding process sum a left and right inputs to produce an center signal C and subtract the left and right inputs to produce a surround signal (i.e. matrix mixing an audio signal) (Fig. 5; column 7, lines 25-60). It would have been obvious to one having ordinary skill in the to employ any known method to decode an audio signal, such as that of Gundry. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Watanabe with the teaching of Gundry to utilize the matrix decoding process in order to produce multichannel signals from the input signals; b) matrix mixing the signal, decoding the surround channel, and directing a low frequency input channel of the signal to a low frequency effect compatible speaker; c) matrix mixing the signal and directing the low frequency input channel of the signal to the low frequency effect compatible speaker; d) matrix mixing the signal, decoding the surround channel, directing the low frequency input channel of the signal to the low frequency effect compatible speaker, and transmitting an ambient noise containing channel of the signal to a speaker system operable to create a three dimensional effect; e) matrix mixing the signal, decoding the surround channel, and transmitting the ambient noise containing channel of the signal to the speaker system operable to create the three dimensional effect; f) matrix mixing the signal, directing the low frequency input channel of the signal to the low frequency effect compatible speaker, and transmitting the ambient noise containing channel of the signal to the speaker system operable to create the three dimensional effect; g) matrix mixing the

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signal and transmitting the ambient noise containing channel of the signal to the speaker system operable to create the three dimensional effect; h) matrix mixing the signal, decoding the surround channel, directing the low frequency input channel of the signal to the low frequency effect compatible speaker, transmitting the ambient noise containing channel of the signal to the speaker system operable to create the three dimensional effect, and center channel equalizing the input signal; i) matrix mixing the signal, decoding the surround channel, and center channel equalizing the input signal; j) matrix mixing the signal, directing the low frequency input channel of the signal to the low frequency effect compatible speaker, and center channel equalizing the input signal; k) matrix mixing the audio signal, transmitting the ambient noise containing channel of the signal to the speaker system operable to create the three dimensional effect, and center channel equalizing the input signal; l) matrix mixing the audio signal, decoding the surround channel of the signal, directing the low frequency input channel of the signal to the low frequency effect compatible speaker, and center channel equalizing the input signal; m) matrix mixing the audio signal, directing the low frequency input channel of the signal to the low frequency effect compatible speaker, transmitting the ambient noise containing channel of the signal to the speaker system operable to create the three dimensional effect, and center channel equalizing the input signal; n) matrix mixing and center channel equalizing the signal; wherein matrix mixing always precedes decoding the surround channel, directing the low frequency input channel, transmitting the ambient noise containing channel, and center channel equalizing the signal, wherein decoding the surround channel of the audio signal always precedes directing the low

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frequency input channel, transmitting the ambient noise containing channel, and center channel equalizing the signal, wherein directing the low frequency input channel always precedes transmitting the ambient noise containing channel, and center channel equalizing the signal, wherein transmitting the ambient noise containing channel always precedes center channel equalizing the signal.

23. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6167140 to Watanabe in view of U.S. Patent No. 6760448 to Gundry as applied to claims 1, 3, 4, 6-9 17-18, 20, 22-24, 26, and 29 above, and further in view of U.S. Patent No. 6442278 to Vaudrey et al. (hereafter as Vaudrey).

24. Regarding Claim 2, Watanabe as modified does not expressly disclose matrix mixing the signal by applying a downmixing algorithm. However it would have been obvious to one having ordinary skill in the art to provide such a downmixing algorithm in order to create a three dimensional effect even though there are less speakers than there are channels, as taught by Vaudrey (Figs. 5, 6, 9, and 9).

25. Claims 10-16 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6167140 to Watanabe in view of U.S. Patent No. 6760448 to Gundry and further in view of U.S. Patent No. 6766028 to Dickens.

26. Regarding Claim 10, Watanabe discloses an audio post processing method comprising the following ordered steps: decoding (2) a surround channel of the audio signal (i.e. a decoder decoding input signals in which multichannel signals are encoded

to output multichannel signals) (Figs. 3 and 11-13), then directing low frequency input channels to a bass compatible speaker (Figs. 3 and 11-13, reference LF). Watanabe discloses a decoder, wherein the decoder separates the inputted signals into four signals, but only generally; no specific hardware or software is taught. Therefore it would have been obvious to one having ordinary skill in the art to seek known methods of decoding. Gundry for example discloses a matrix decoding process, wherein the matrix decoding process sum a left and right inputs to produce an center signal C and subtract the left and right inputs to produce a surround signal (i.e. matrix mixing an audio signal) (Fig. 5; column 7, lines 25-60). It would have been obvious to one having ordinary skill in the to employ any known method to decode an audio signal, such as that of Gundry. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Watanabe with the teaching of Gundry to utilize the martrix decoding process in order to produce multichannel signals from the input signals. Watanabe as modified does not expressly discloses applying a headphone algorithm. However it would have been obvious to one having ordinary skill in the art to provide such a headphone algorithm in order allow the user to connect a headphone to the system and still create a three dimensional effect, as taught by Dickens (Figs. 3 and 4);

27. All elements of Claim 11 are comprehended by Claim 10. Claim 11 is rejected for the reasons stated above apropos to Claim 10.

28. Regarding Claim 12, Watanabe as modified discloses matrix mixing the signal by applying a Prologic algorithm (Gundry, Fig. 5; column 7, lines 25-60).

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29. Regarding Claim 13, Watanabe as modified discloses driving the headphone speaker with a center channel of the signal (Dickens, Figs. 3 and 4).

30. Regarding Claim 14, Watanabe as modified discloses driving the headphone speaker with a surround channel of the signal (Dickens, Figs. 3 and 4).

31. Regarding Claim 15, Watanabe as modified discloses transmitting ambient noise to the headphone speaker (Dickens, Figs. 3 and 4).

32. Regarding Claim 16, Watanabe as modified discloses inputting a listener preference and available equipment status into a player console, wherein the listener preference reflects a desired post processing effect (column 5, lines 12-24).

33. Regarding Claim 28, Watanabe discloses an audio post-processing system, comprising: at least one decoder operable to perform the following sequenced steps: decoding (2) a surround channel of the audio signal (i.e. a decoder decoding input signals in which multichannel signals are encoded to output multichannel signals) (Figs. 3 and 11-13), then directing low frequency input channels to a bass compatible speaker (Figs. 3 and 11-13, reference LF); a player console operable to receive system listener input (column 5, lines 12-24); a signal source producing a signal comprised of a plurality of channels, each channel operable to drive a loudspeaker positioned at one or more of a plurality of destinations (Figs. 3 and 11-13). Watanabe discloses a decoder, wherein the decoder separates the inputted signals into four signals, but only generally; no specific hardware or software is taught. Therefore it would have been obvious to one having ordinary skill in the art to seek known methods of decoding. Gundry for example discloses a matrix decoding process, wherein the matrix decoding process sum a left

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and right inputs to produce an center signal C and subtract the left and right inputs to produce a surround signal (i.e. matrix mixing an audio signal) (Fig. 5; column 7, lines 25-60). It would have been obvious to one having ordinary skill in the to employ any known method to decode an audio signal, such as that of Gundry. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Watanabe with the teaching of Gundry to utilize the martrix decoding process in order to produce multichannel signals from the input signals. Watanabe as modified does not expressly discloses applying a headphone algorithm. However it would have been obvious to one having ordinary skill in the art to provide such a headphone algorithm in order allow the user to connect a headphone to the system and still create a three dimensional effect, as taught by Dickens (Figs. 3 and 4);

34. Claims 19 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6167140 to Watanabe in view of U.S. Patent No. 6760448 to Gundry and further in view of U.S. Patent No. 6766028 to Dickens.

35. Regarding Claim 19, Watanabe as modified discloses output amplifiers (4A-D), but does not expressly disclose a headphone speaker. However it would have been obvious to one having ordinary skill in the art to provide a headphone algorithm in order allow the user to connect a headphone to the system and still create a three dimensional effect, as taught by Dickens (i.e. the amplifiers are then operable to drive headphone speaker)(Figs. 3 and 4);

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36. Regarding Claim 25, Watanabe as modified does not expressly disclose said at least one decoder utilize a VES algorithm to direct an ambient noise channel of the audio signal to loudspeakers positioned towards the front of the listener. However it would have been obvious to one having ordinary skill in the art to provide such a VES algorithm in order to produce a three dimensional effect when there are less speakers than input channels, as Dickens (Figs. 3 and 4).

37. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6167140 to Watanabe in view of U.S. Patent No. 6760448 to Gundry and further in view of U.S. Patent Application Publication No. 20040120537 to Takei. Regarding Claim 27, Watanabe as modified discloses said at least one decoder create a surround sound channel for ambient noise, but does not expressly disclose two loudspeakers that are located to the right and left behind the listener. However it would have been obvious to one having ordinary skill in the art to modify the surround signal (3S) of Watanabe to produce a surround left channel and a surround right channel by utilize a stereo means, as taught by Takei (Fig. 2, reference 4; page 3, paragraph 0053).

### ***Response to Arguments***

38. Applicant's arguments filed 7/22/2005 have been fully considered but they are not persuasive.

39. With respect to Applicant's argument on page 13, stating that "Takei does not teach the specific sequence claimed by Applicants. Moreover, Takei does not teach base management or enhanced surround sound techniques recited in claim 1 (i.e., directing a low frequency input channel of the audio signal to a low frequency effect compatible speaker and transmitting an ambient noise containing channel of the audio signal to a speaker system operable to create a three dimensional effect). The reason for Takei's failure to teach such features speaks to its disparate purpose", has been noted. However the Examiner respectfully disagrees. Applicant discloses "matrix mixing an audio signal, then decoding a surround channel of the audio signal", which is not clearly defined in the claim and can be interpreted as many things, such as two source signals of an L total signal (Lt) and R total signal (Rt) are supplied to an adaptive matrix circuit 1 to be decoded into four channel signals of a front left channel (Lch) signal, center channel (Cch) signal, front right channel (Rch) signal, and a rear surround channel (Sch) signal, which reads on matrix mixing an audio signal, then decoding a surround channel of the audio signal (i.e. the matrix mixing performs the decoding of the audio signal). Applicant discloses "directing a low frequency input channel of the audio signal to a low frequency effect compatible speaker", wherein "**low frequency** input channel" is not clearly defined in the claim and can be interpreted as many things, such as any one of the channels, Lch, Rch, Cch, Sch, can be the low frequency input channel because it contains low frequency and is directed to a speaker, which is **compatible** of producing the low frequency, which reads on "directing a low frequency input channel of the audio signal to a low frequency effect compatible speaker". Applicant discloses

“transmitting an ambient noise containing channel of the audio signal to speaker system operable to create a three dimensional effect”, wherein “an **ambient noise containing channel** of the audio signal to **speaker system**” is not clearly definite in the claim and can be interpret as many things, such as Lch, Rch, SLch, SRch, which reads on “transmitting an ambient noise containing channel of the audio signal to speaker system **operable** to create a three dimensional effect”. See Fig. 2.

40. With respect to Applicant's argument on page 14, stating that any combination of Watanabe with Gundry fails to suggest the specific sequence of post processes recited in claim 1. In fact, both reference fail to contemplate (in any sequence) enhanced surround sound features embodied in claim 1 (i.e., transmitting an ambient noise containing channel of the audio signal to a speaker system operable to create three dimensional effect)”, has been noted. However the Examiner respectfully disagrees. Applicant discloses “transmitting an ambient noise containing channel of the audio signal to speaker system operable to create a three dimensional effect”, wherein “an **ambient noise containing channel** of the audio signal to **speaker system**” is not clearly defined in the claim and be interpret as many things, such as references 6L, 6R, and surround speaker, which reads on “transmitting an ambient noise containing channel of the audio signal to speaker system **operable** to create a three dimensional effect”.

41. In response to applicant's arguments on page 14, against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642

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F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

42. With respect to Applicant's argument on page 15, stating that "Applicant respectfully submit that independent claim 17, is novel and non-obvious over the prior art of record for at least the same reasons discussed above in connection with claim 1", has been noted. However the Examiner respectfully disagrees. See argument above.

43. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., sequence that dramatically reduces distortion) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

44. With respect to Applicant's argument on page 15, stating that "the prior art does not suggest the recited sequence that dramatically reduces distortion in the plagues conventional audio system, as discussed above in connection with the preceding independent claims. Claim 28 is therefore novel and non-obvious over the prior art of record", has been noted. However the Examiner respectfully disagrees. See argument above.

45. With respect to Applicant's argument on page 15, stating that "independent claim 29, this claim includes a sequence of method steps similar to those recited in claim 1. Claim 29 is therefore novel and non-obvious for reasons similar to those discussed in

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connection with claim 1", has been noted. However the Examiner respectfully disagrees. See argument above.

46. With respect to Applicant's argument on page 15, stating that "the references fail to suggest "wherein directing the low frequency input channel always precedes transmitting the ambient noise containing channel, and center channel equalizing the signal; and wherein transmitting the ambient noise containing channel always precedes center channel equalizing the signal." The references even fail to disclose the steps of "directing a low frequency input channel of the signal to a low frequency effect compatible speaker, and transmitting an ambient noise containing channel of the signal to a speaker system operable to create a three dimensional effect," both of which comprise part of ht sequence", has been noted. However the Examiner respectfully disagrees. Applicant disclose "an audio post processing method comprising performing a **sequence selected from the group** consisting of", therefore **only one** of the sequence selected from the group a-n need to be met.

### ***Conclusion***

47. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

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TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

48. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

December 12, 2005  
CPC



HUYEN LE  
PRIMARY EXAMINER